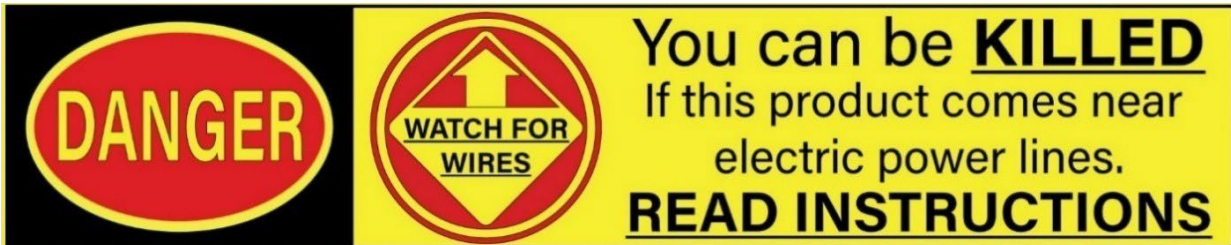


Range Xperts XPS-1500 HDTV Outdoor Antenna Manual

***NOTE: BEFORE STARTING, READ ALL SAFETY WARNINGS IN THIS MANUAL!!!**



STOP!

1. READ THIS MANUAL'S INSTALL & SAFETY SECTIONS FIRST!
2. INSTALLING EVEN NEAR POWER LINES IS DEADLY!
3. IF ORDERED THE VHF/UHF VERSION, TO PREVENT ASSEMBLY CONFUSION, PLEASE WAIT TO OPEN THE LONG SKINNY BOX (VHF KIT ADD-ON), UNTIL AFTER THIS UHF ANTENNA IS FULLY ASSEMBLED.

WARNING:	<ol style="list-style-type: none">1. Installation of this product near power lines is DANGEROUS& DEADLY!2. For Lightning safety, the antenna and mast should be grounded according to NEC standards.3. For your safety, <u>read all the warnings in this manual prior to installation.</u>4. If English isn't your first language and/or need help reading this manual, please seek help for a translation into your native language.
ADVERTENCIA:	<ol style="list-style-type: none">1. ¡La installation de este producto cerca de líneas eléctricas es PELIGROSA y MORTALES!2. Para la seguridad contra rayos, la antena y el mástil deben estar conectados a tierra de acuerdo con las normas NEC.3. Para su seguridad, <u>lea todas las advertencias en este manual antes de la instalación.</u>4. Si el inglés no es su primer idioma y / o necesita ayuda para leer este manual, busque la ayuda para una traducción a su idioma nativo.

Note: if you've purchased the VHF/UHF version, the VHF upgrade kit may be shipped separately and may not arrive on the same day.

***IMPORTANT: READ & OBEY ALL SAFETY WARNINGS – INSTALLING NEAR POWER LINES OR FALLING/SLIPPING ARE JUST SOME INSTALL DANGERS THAT CAN BE DEADLY!**

***IMPORTANT – IF YOU PURCHASED THE VHF/UHF VERSION, ASSEMBLE THIS UHF ANTENNA FIRST, BEFORE OPENING THE BOX WITH THE VHF KIT!**

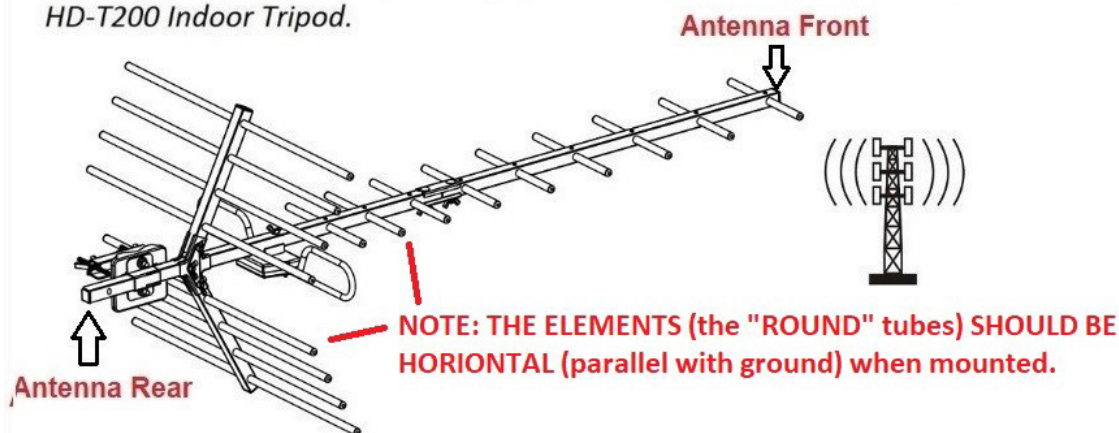
***IMPORTANT – THE MAST CLAMP SHOULD BE ORIENTATED SUCH THAT THE ANTENNA'S ELEMENTS (the "ROUND" tubes) ARE HORIZONTAL (parallel with the ground) when installed on a mast/pole.**

***After installation, the new channels will not populate until an "Auto Channel Scan" is completed on your TV set (note: manually entering the channel usually won't work until after the auto scan is complete on the TV).**

Range Xperts XPS-1500HDTV Outdoor Antenna

(Xtreme Performance Series - 250 /100 Mile Range)

**Note: for indoor or attic mounting, you'll need to purchase an indoor mount or our HD-T200 Indoor Tripod.*



***RangeXperts is a Top Notch Antennas LLC Brand.**

Frequency :	470 – 608MHZ	Gain:	1.5 / 16dbi
Standing wave ratio:	≤1.5	Impedance:	75 Ohm

***NOTE: BEFORE STARTING, READ ALL SAFETY WARNINGS IN THIS MANUAL!!!**

ITEM CONTENTS

This Package Includes:

- 1 x Top Notch Antennas LLC model Range Xperts XPS-1500 Outdoor HDTV Antenna with two powerline warning stickers already installed on each side of main boom..
- 1 x Heavy Duty Mast Clamp.
- 1 x Spare PowerLine Warning Sticker (an extra warning sticker, in case any needs replaced on antenna in future).

PREFACE

NOTE: If you purchased the Top Notch Antennas model Range Xperts XPS-2500 or the optional VHF upgrade kit for the XPS-1500, you may receive the VHF Upgrade Kit in a separate box or shipment.

Thank you for purchasing the Range Xperts XPS-1500 (a Top Notch Antennas LLC brand). The XPS-1500 HDTV Antenna is Deep Fringe Capable on the UHF band. This UHF only version also has some VHF abilities, but will be limited on this band without the VHF Upgrade Kit (already included in the long range VHF/UHF version). If you have just the UHF version and need long range VHF-hi range for your area, you can learn more about our VHF Upgrade Kit at our website at www.TopNotchAntennas.com or www.RangeXperts.com

This guide is not only an assembly instruction manual but also includes a troubleshooting and tips guide to also help you get the best out of your antenna. These tips explain how to fix, maximize, or at least explain why some channels may not possible along with any possible remedies.

***IMPORTANT: READ & OBEY ALL SAFETY WARNINGS – INSTALLING NEAR POWER LINES OR FALLING/SLIPPING ARE JUST SOME INSTALL DANGERS THAT CAN BE DEADLY!**

***IMPORTANT – IF YOU PURCHASED THE VHF/UHF VERSION, ASSEMBLE THIS UHF ANTENNA FIRST, BEFORE OPENING THE BOX WITH THE VHF KIT!**

***IMPORTANT – THE MAST CLAMP SHOULD BE ORIENTATED SUCH THAT THE ANTENNA’S ELEMENTS (the “ROUND” tubes) ARE HORIZONTAL (parallel with the ground) when installed on a mast/pole.**

***IF REPLACING AN “AMPLIFIED” ANTENNA, ensure all its powered components (amplifier, power supply/coax inserter, control box etc) are completely removed off the coax line, as they’re generally incompatible with other antennas and will severely drop out the reception.**

SAFETY & WARNINGS



You can be **KILLED**
If this product comes near
electric power lines.
READ INSTRUCTIONS

WARNING:	<ul style="list-style-type: none">➤ Installation of this product near power lines is DANGEROUS & DEADLY!➤ For Lightning safety, the antenna and mast should be grounded according to NEC standards.➤ For your safety, <u>read all the warnings in this manual prior to installation.</u>➤ If English isn't your first language and/or need help reading this manual, please seek help for a translation into your native language.
ADVERTENCIA:	<ul style="list-style-type: none">➤ ¡La installation de este producto cerca de líneas eléctricas es PELIGROSA y MORTALES!➤ Para la seguridad contra rayos, la antena y el mástil deben estar conectados a tierra de acuerdo con las normas NEC.➤ Para su seguridad, <u>lea todas las advertencias en este manual antes de la instalación.</u>➤ Si el inglés no es su primer idioma y / o necesita ayuda para leer este manual, busque la ayuda para una traducción a su idioma nativo.

***NOTE: READ & OBEY ALL SAFETY WARNINGS – INSTALLING NEAR POWER LINES OR FALLING ARE SOME INSTALL DANGERS THAT CAN BE DEADLY!**

NO LIABILITY DISCLAIMER:

Top Notch Antennas LLC dba Range Xperts is not liable for any product, property, bodily, personal harm, injury, or damages resulting from the installation (proper or improper) of this product or the continued use thereof. Nor is any coverage, protection, liability or insurance offered with the sale of our products. Never install near power lines, it's deadly and you're putting your own life at risk. Using ladders, climbing towers or onto roofs, slipping, falling, cuts or eye injury from antenna parts with sharp ends/corners/edges/burrs, lightning, and power lines are just some dangerous install risks & liabilities that are assumed entirely by the end user using and/or installing the product(s). When in doubt, hire a local professional to do this for you.

We (Top Notch Antennas LLC dba Range Xperts) are also not liable for any product, property, bodily, or personal harm or damages at any time from either any natural or unnatural events, including weather, storms, lightning, fire, tornadoes, hurricanes, and/or disasters and offers no insurance for such events of any kind, however if a

Range Xperts product itself is damaged and still under warranty, we may replace the Range Xperts products and/or their respective parts per the terms outlined in our Two Year Limited warranty policy. Note that our Two Year Limited Warranty only covers the replacement of Range Xperts antenna products and their respective parts only, no other coverage is granted, expressed or implied.

MAY NOT BE COMPLETE OR FULLY ACCURATE DISCLAIMER: Many common and important install safety guidelines and warnings are included in this manual, but may not cover every possible install variable or scenario. If you're not comfortable doing it yourself, need help, or unsure on how to safely install your antenna, please consult a local professional to do this for you.

Some safety guidelines such as grounding, are only our interpretation of NEC (National Electric Codes) guidelines, however may not be accurate or up to date. For example, local codes may differ or the NEC itself may edit, add to, re-word, make new suggestions, or otherwise update their guidelines periodically that may not be reflected on our website or product manuals.

WE ARE NOT ANTENNA INSTALLERS DISCLAIMER: – We focus on the design of and selling antenna products only, but are not installers, as such we are not experts, gurus, nor are we certified or licensed in the installation of antennas. Our knowledge may not be correct or accurate in the installation of antennas, therefore cannot give install advice. This manual serves as a broad guide, subject to change and may not be complete or fully accurate, if unsure on installation procedures, safety, and/or grounding, we recommend asking a certified professional in your area for install guidance.

RECEIVING NEW PACKAGES & PRODUCTS SAFETY DURING COVID-19 CORONAVIRUS PANDEMIC

CORONAVIRUS (COVID-19) RECEIVING NEW PACKAGES & PRODUCTS SAFETY:

We ask to be safe and add extra precautions due to this highly contagious and dangerous virus. Coronavirus COVID-19 Coronavirus, as a national emergency pandemic at the moment. It's a highly infectious that is quickly becoming widespread. It has also been found to live on surfaces for up to 3 days. Many may be infected without realizing it (such as your local UPS or US post office delivery driver or a warehouse packing worker for example).

Although the CDC states catching the virus from shipped products poses a low risk, we are still learning new things about the COVID-19 virus and new info is still evolving about it how highly infectious it is. To be safe with your everyday shipments to your home, be diligent in preventing this disease by:

Steps You Can Take to Help Protect Yourself:

- If possible leave your daily package(s) outside for a few extra days before bringing it inside (even if it took more than 3 days to get to your home, the person (such as your local UPS or USPS delivery driver) could be infected and not know it).
- Just like when objects in public stores, you can play it safe by also avoiding the touching of your eyes, nose, or mouth with unwashed hands after touching/handling new packages, boxes, objects, and products shipped to you, (also follow this rule when touching objects at your local stores and in public places too).
- Similarly as you would after touching objects / products at your local stores / public places, wash your hands with soap and water for at least 20 seconds after handling new packages and products shipped to you as well. When soap and running water are unavailable, use an alcohol-based hand rub with over 60% alcohol.
- People age 2 and older should wear masks in public settings and when around people who don't live in their household.
- Masks offer some protection to you and are also meant to protect those around you, in case you are unknowingly infected with the virus that causes COVID-19.
- If you have gloves, use them while opening outer and inner shipping boxes and packaging, and product, however be aware not to touch your face, eyes, mouth or nose with them, and still wash your hands with soap and water for 20 seconds after removing them (as your hands often become contaminated whilst removing your gloves).
- Frequently wash your hands with soap and water for at least 20 seconds. When soap and running water are unavailable, use an alcohol-based hand rub with over 60% alcohol.
- On product and their associated packaging boxes, you may use alcohol wipes with over 70% (higher the better) alcohol content, (if not available, Lysol wipes are also believed to also kill the virus) to disinfect their surfaces, but also don't forget to also wash your hands with soap and water afterwards for at least 20 seconds too after handling recently received boxes and products and remember not to touch your face mouth, nose, or eyes beforehand.
- Carefully dispose of boxes and packaging in an outdoor trash container, (don't forget about not touching your face, eyes, mouth, or nose until you wash your hands with soap and water for at least 20 seconds after handling new packages and products).
- Rubbing alcohol and lysol and their wipes thereof should never be consumed, when purchasing food or ingested items, use something meant for those items / purpose.
- If there was cross-contamination on another surface, also sanitize the surface the product(s), box, and/or packaging were resting on..
- Note: personal daily items such as your cell phones, smartphones, sunglasses, you should actually be disinfecting already regularly because they're often in our hands and near our faces and mouth, as such pose higher contamination risk than shipped items, due to our frequent, personal contact with them. Use their manufacturer recommendations on how to disinfect these items regularly.
- Always wash hands that are visibly soiled.
- Avoid close contact with people who are sick.
- Stay at least 6 feet away from others (maintain social distancing) regardless if they appear sick or not, and avoid groups of people.
- Handshaking, fist bumps, or shoulder bumps should be avoided entirely..
- Don't share personal items with others. This includes things like drinking glasses, utensils, toothbrushes, and lip balm.
- Wipe down high-touch surfaces like doorknobs, keyboards, and stair rails in your home with household cleaners or a diluted bleach solution.

- Wash your hands robustly for 20 seconds with soap and water or use a more than 60% alcohol hand sanitizer after also touching surfaces like elevator or ATM buttons, gas pump handles, and grocery carts.
- Stay home and call your doctor if you start having respiratory issues and think your symptoms are consistent with those of COVID-19.

BEFORE INSTALLING / SITE SELECTION

- Select a safe site to install the antenna.
- The distance between any power lines and the installation site should be at least two times the total height of the mast, tower, mount, plus the length of the antenna. Make the separation distance away from power lines even greater, if at all possible. Since all overhead power lines look somewhat alike, consider them all dangerous and stay well away from them.
- If you have power lines in the area, call your local electric utility for assistance.
- Never install during wet or icy conditions or surfaces (the risk of falling or getting hurt isn't worth it).
- Climbing on ladders, towers, roofs, etc can be risky and dangerous! Slipping, or falling can put your life at risk! If unsure, please hire a professional to install you antenna for you!

DON'T LOSE YOUR LIFE, FOLLOW THESE INSTALLATION SAFETY WARNINGS!

INSTALLING THIS PRODUCT NEAR POWER LINES IS DEADLY!!

¡LA INSTALACIÓN DE ESTE PRODUCTO CERCA DE LAS LÍNEAS ELÉCTRICAS ES MORTAL Y PELIGROSA!



1. **WARNING: Installing Near Power lines IS Deadly! A safe distance away from power lines should be at least double" the total height (including tower, mount, antenna, and mast height) plus double the length of the antenna!!**
2. **Note: be careful assembling and installing, as this VHF Kit does have parts and tubing with sharp aluminum and metal parts, ends, edges, and corners, protect your eyes and hands by wearing gloves and protective eye gear.**
3. Perform as much antenna assembly on the ground as possible.
4. NEVER work alone; with two people or more, assemble antenna on the ground and use help for the mounting of antenna, tower, and/or mast.
5. Ensure power line warning sticker is installed on both sides of the antenna (if any are missing or need replaced, a spare has also been included in the box).
6. Check weather conditions. Be sure that it hasn't rained recently and that the lawn is not wet or muddy. Make sure that rain or thunderstorms are not predicted for the day you decide to install the antenna.
7. The wind can blow the antenna into a nearby power line. Don't install or remove antennas in moderate or heavy winds.
8. If using a ladder, make sure it's made of non-conductive (non-metallic) material!
9. If possible, have someone present who has been trained in electric shock first aid.
10. If you're unable or uncertain on how to install and/or mount your TV antenna, always seek the help of a professional to do this for you.
11. **You can lose your life if this antenna or its mast, tower, or mounting solution comes in contact with or even near a power line!**
12. Watch out for power line (overhead and in all directions) If the antenna, guy wire, mast, tower, or other connecting equipment comes near a power line, it can kill!
13. If using guy wires, estimate the length of each wire first and make sure none can come near any power lines during erection, installation, or falling.
14. **WARNING: Use extreme caution when installing the antenna. If the antenna or mast starts to fall, let it drop! It could have contact with an overhead power line and both the mast and antenna are conductors of electricity and power line voltages and current are lethal! Let antenna / mast fall and then call your local utility company to remove from power lines!**
15. If an accident or contact occurs call 911 immediately (or similar emergency line if in another country). Never touch a person that is in contact with a power line (you'll also be electrocuted).
16. If the person is free and away from the power lines and not responding, check for pulse and breathing. If not breathing, conduct CPR until medical help has arrived.
17. If you're not confident in safety, a safe installation, and/or the proximity of the power lines, contact a professional TV antenna installer to do the work for you!
18. Install on a calm, no-windy day (wind can easily make things get out of hand and increases chance of touching or too close to power lines and loss of control of antenna, mast, and/or tower due to the wind forces applied on a large surface area).
19. For lifting, erecting, climbing, and/or installing the antenna, look for all power lines to ensure they are a safe distance away. A safe distance away from power lines should be at least "double" the total height (ex: the combined mast, tower, mount height) plus double the length of the antenna!!
20. Never use a metal ladder (these are highly conductive, and much more dangerous near power lines)!
21. Even the slightest touch or even just the near proximity of antenna, mast, guy wire, or tower of a power line can kill! Never chance it!
22. When on the roof, ladder, or tower, have a spotter on the ground, to help see things that you can't.

23. If you start to lose control of the antenna, mast, or other, let go and let it drop to the ground, to, as either power line contact or falling off a tall roof, ladder, or tower (even without power line contact) can all be lethal or result in a severe injury.
24. If an accident or contact occurs call 911 immediately (or your country's emergency line if in another country). Never touch a person that is in contact with a power line (you'll also be electrocuted).
25. Instruct and ensure everyone involved in the installation understands the safety and power line warnings.
26. Never remove anything that has made contact with a power line, as it can be lethal or can cause electrocution during the removal process! Contact your local utility company's emergency line for assistance!
27. In addition to antenna, keep mast, tower, mount, and all guy wires (if applicable) well away from power lines, as all of these act as electrical conductors of electricity.
28. The distance between any power lines and the installation site should be at least two times the total height of the mast, tower, and antenna assembly plus the length of the antenna. Make the separation distance away from power lines even greater if possible.
29. Since all overhead power lines look somewhat alike, consider them all dangerous and stay well away from them!
30. Add the antenna to the mast first, prior to mast erection. If using guy wires, estimate the length of each wire first and make sure none can come near any power lines during erection, installation, or falling. Use the double rule, of all power lines should be at least double the mast height plus double the antenna length away.
31. Install the guy ring on mast and connect guy wires with appropriate guying hardware and clamps.
32. Note, the mast is highly unstable prior to finishing all guying; you must have someone also hold the mast upright while the guy wires are attached and tightened to stay anchors.
33. "Tie off" the mast with dry, non-conductive ropes so you can control side sway and the direction of fall as you walk assembly up. If it does start to fall, let go of it and let it fall.
34. Don't attempt to "walk up" a mast over 30 feet tall. Get a professional to do it for you.
35. Once the antenna is up in full vertical position, securely fasten by using the instructions included with your chosen mount.
36. Also add necessary lightning protection, by properly grounding your antenna and mast/tower (see grounding safety section for more about proper grounding methods).
37. Never install while surfaces are wet, during storms/ rain, snow, or icing is present as roof, ladders, and related will be very slick and dangerous.

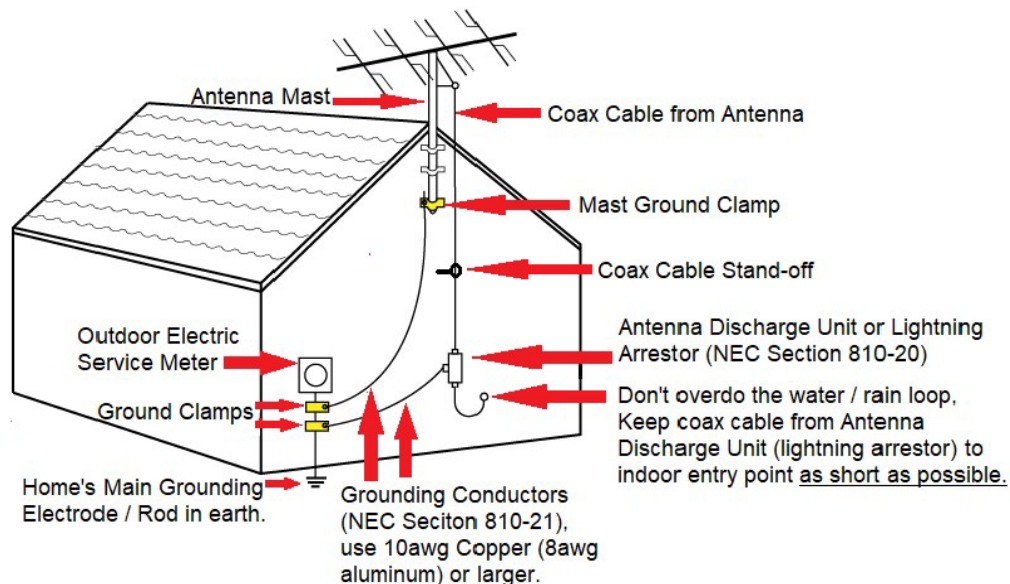
EMERGENCY AID FOR SHOCK

- It is advisable to work with several other people when installing or removing an antenna. One person should stand aside to direct the effort and watch for signs of trouble. If someone does receive a shock, don't touch the victim while his body is still in contact

with the electricity. Instead, pry or pull him away from the source of electricity with a length of dry wood, rope, a blanket, or another non-metallic object.

- If breathing has stopped, use mouth-to-mouth resuscitation until a doctor or ambulance arrives and relieves you. If the heart has stopped, closed-chest cardiac massage must be done simultaneously. The ambulance should be informed when called that an electric shock has occurred; it can bring proper equipment such as an intensive care or cardiac care mobile unit equipped with a heart defibrillator and carrying trained personnel.

ANTENNA GROUNDING & LIGHTNING SAFETY



***Shown for Demonstration Use Only! - OBEY POWER LINE WARNINGS!**

WARNING: Power lines can kill! A safe distance away from power lines should be at least double the total height (including tower, mount, antenna, and mast height) plus double the length of the antenna!!

- Lightning can be destructive to your antenna, home, TV, and nearby / inline electronics. To add some lightning protection a properly grounded system is necessary.
 - Grounding the system is something you can probably do yourself, **BUT IF YOU'RE NOT SURE, PLEASE HIRE A PROFESSIONAL TO DO THIS PROPERLY FOR YOU!**
 - You can buy a grounding rod, 75 ohm lightning arrestors, clamps, wire, and related grounding accessories at most local hardware stores.
1. Use a #10 copper or #8 aluminum grounding wire or larger, properly fastened via a proper grounding clamp to the bottom of the mast. Using stand-offs every 4 to 6 feet, run the wire down the building in as straight a line as possible.
 2. The NEC requires that the antenna mast and mount be grounded directly. No splices or connections are allowed in the ground wire between the mast and the ground rod.

3. If the mast or mount is painted, rusted, or has a non-conductive coating, these should be scraped off to bare metal where the ground clamp connects to it, to ensure a low resistive path to ground.
4. Also ground the coax lead in to the home by adding an antenna discharge unit, (also known as a lightning arrestor with ground block). The lightning arrestor model chosen should also have a direct ground connection as well, and install it outside, as close as possible before the cable enters the house.
5. Attach the grounding wire to the lead-in cable's antenna discharge unit or lightning arrestor and without making sharp turns, run the ground wire to the central building ground, which is the home's main ground rod, typically installed at the power meter and breaker box.

Alternative Grounding electrode methods must be acceptable NEC grounding methods such as:

- Grounded interior metal cold water pipe within five feet of the point where it enters the building.
- Grounded metallic service raceway.
- Grounded electrical service equipment enclosure.
- Eight-foot grounding rod driven into the ground (may be used only if bonded to the central building ground by #6 or heavier bonding wire). You can buy a grounding rod, grounding blocks, clamps, and wire at most local hardware stores.
- Other acceptable grounding electrodes that comply with sections 250 and 810 of the National Electrical Code (NEC)

ROOFTOP INSTALLATIONS

- DO NOT assume that just because you're on a roof, you're isolated from ground. You may still be electrocuted or fall off the roof.
- Also obey power line and grounding warnings in this manual.

UN-INSTALLING THE ANTENNA:

Use these same safety guidelines for the removal of your antenna (but in reverse order).

TIPS & TROUBLESHOOTING

NO SIGNAL WHEN ENTERING CHANNEL MANUALLY: If you are inputting a channel number directly instead of using the Auto Scan feature, the TV likely won't find the channel. The auto scan feature is necessary to (or known as auto program them in, because the TV stations no longer use a set of frequencies (the real channels / freqs are different from the channel shown on a TV). Also there are several channel spacings on each digital channel, thus the AUTO SCAN feature on the TV set must be ran through after each change to retrieve any new channels.

OUTDOOR PREAMPLIFIER DROPS / DEGRADES SIGNAL: Please be aware that most outdoor preamplifiers use a separate component called a "Coax Power Inserter (or injector) that sends DC power through the coax cable. Oftentimes (even when light is lit on the Coax Power Inserter) the DC power doesn't make it all the way to the end to the preamplifier (due to splitters or what not in between dropping the voltage below it's threshold). If you must have a splitter in between the "Coax Power Inserter" piece and the outdoor amplifier module, make sure you are using the connector on splitter marked as "DC Power Pass" or "Power Pass Through" IF your splitter doesn't have this DC pass feature, it may prevent voltage passing through, which will severely block signals whilst in an unpowered state.

YOUR PREVIOUS ANTENNA WAS AN "AMPLIFIED ANTENNA" & RECEPTION IS NOW WORSE – IMPORTANT: If you were using an "amplified" or "rotating" antenna before, you must remove the control box / amplifier module that came with these antennas off the coax line entirely (otherwise they will drop the signal). If you have already removed the incompatible items / remnants from the amplified antenna off the coax line entirely, this means you may have high installation loss that warrants the addition of a signal amplifier or preamplifier. This is common with installs that have splitters in the coax line or a long coax run. We offer inexpensive signal preamplifiers that should remedy the high loss signal drop, if you need one.

WAS USING CABLE BEFORE, NO CHANNELS AFTER USING ANTENNA: You likely still have the TV set in Cable mode instead of Over the Air Antenna. You'll need to enter your TV settings to switch back to Over the Air / Antenna and then run an "Auto Scan" to program the Over the Air channels into the TV set.

DO I NEED A ROTOR OR NEED TO TURN MY ANTENNA?:

The "higher the gain" of an antenna, the more directional they become (think of how a flashlight focuses light into a smaller beam for further viewing range). This antenna is indeed very directional, however, moderate to strong stations may come from the back the sides, without being pointed at them. It's the weaker stations where direction of antenna will be critical. So despite having stations in different directions, adding a rotor may not be necessary, as this antenna can be pointed towards the weaker stations yet still has some range capabilities at its sides and back (albeit at a much low range).

Further out stations or stations with terrain obstructions (known as 1edge and 2edge paths per TVfool.com) most definitely will require the antenna to be pointed directly at them however. So the trick is to aim the antenna at that hardest to pick up cluster of stations in the same direction, as the strong stations in the other directions, in many cases, may still come in just fine even though the antenna isn't pointed directly at them.

Using a Coax Switch Instead of a Rotor:

An often-overlooked solution (and less costly) is using a second directional or Omni antenna with a "Coax" switch. That way you can just set the antennas direction just once and just switch back and forth. Coax switches can be found inexpensively.

I Only Ordered the XPS-1500 UHF Centric Antenna, Do I Need the Optional VHF UPG Kit?:

If you've ordered the UHF version only, our VHF upgrade kit makes a drastic improvement to this model's VHF performance. If you purchased the XPS-1500 UHF model only you can expect exceptional UHF range in the direction the antenna is pointed, and some moderate VHF abilities. For most areas, majority of stations since the digital conversion have migrated to UHF (but not in all areas), but many areas may also have a few VHF stations.. If your area has weaker VHF stations of interest our VHF Upgrade Kit will upgrade it to long range on both the VHF and UHF bands.

TV CHANNELS ARE OFTEN NOT THE REAL CHANNELS NOW - Also, be aware, that the channel designations on your TV also mean very little in terms of actual "real" frequency today. The channels on TV sets, nor the channels the stations advertise on your TVs rarely reflect their actual broadcasting frequencies today (for example, in many areas, channels 2-13 are no longer broadcasting on VHF today). Thus, it's recommended to run a TV signal report at the popular reference site such as Rabbitears.com or TVfool.com to confirm both the real and virtual channels of the various stations in your area. While you run this report, also review the channels and the "path" column, as we'll explain some of these paths, what they mean for your area and why certain ones may be impossible to capture reliably and/or are highly random in nature (i.e. Tropo and 2edge paths). If their "Real" channels are indeed on VHF, the optional Long Range VHF kit may help a great deal.

NOTE: If you need help with running TV signal reports or finding this information on TVfool.com signal reference site, we're happy to do this for you. Contact us via our website at www.TopNotchAntennas.com or www.RangeXperts.com.

Trees / Buildings in the Way / Testing Multiple Mounting Locations:

An often overlooked, (yet just as important as correct direction orientation) test, is in addition to direction, also moving the TV antenna or mast to different mounting locations (even just 5 or 10 feet away) can make a huge, profound difference! Depending on the trees in your neighborhood or adjacent homes, moving the antenna to a different mounting position even just five feet away can make profound differences in reception and the amount of channels found! Thus, we recommend trying at least 3 mounting

locations, to determine which yields the best results. **Also sometimes lowering the height aggressively can help pass signals through the trees.**

Metal, Brick, Stone/Rock and Concrete Building, Wall, & Siding Problems:

This is a problem with almost all apartment and condo buildings and mounting inside many residential homes as well. Metal, concrete, brick, and rock walls, siding, and/or buildings are a TV antenna's worst enemy. If there are any of these materials (large metal bins, buildings, your home or neighbor's home..) in the way of your antenna, towards the station(s), this will likely cause a severe reception problem and you'll need to move the antenna to another spot such that they're not in the direct path (this is why ideally above the roof height works the best).

Metal & Material Detuning:

Not only do you have to be aware of metal directly in front of its path, but any metal or semiconductor material (including concrete, brick, etc) within 3ft above, below, or to the sides of the antenna can actually detune a TV antenna's frequency (thus reducing its range). Excluding the TV mast, be aware of any of these materials that are in a close proximity (this is especially important with attic installs, as installing too high can actually reduce range; due to type of roof shingles or metal roof flashing, thermal / metallic radiant barriers, thin metal insulation films or related in the attic).

For easier, improved indoor reception, we also have a tool-less indoor tripod available to help combat this problem, by not relying on mounting it directly to a wall or top of attic and to help move antenna in any spot you wish instantly on the fly, and properly away from the nearby troublesome materials (**however if the aforementioned indoor materials are blocking the actual direction of the stations, an outdoor install is likely required**).

Our optional tool-less Attic Tripod Mount (signal peaking technology):



Attic Installation:

We've created an optional nifty mount (shown above) that helps getting the best attic reception possible easily and with no tools, known as our tool-less, transportable telescoping tripod (see our website).

Although our indoor tripod is helpful, it should be noted that attic installations can often be highly problematic and are also often the trickiest to troubleshoot due to unknown material obstructions as explained above (in addition to the walls, there may be hidden metallic radiant barriers/films underneath the insulation or roof flashing in the way as examples). **If you absolutely cannot get good reception in the attic, it's highly recommended to try on a main floor, or best yet, outside just to compare results & to help troubleshoot if it's something within the attic or walls creating an issue.**

PATH DEFINITIONS:

LOS (Line-of-Sight) – This is normal path condition and most predictable. This means the land is fairly flat without significant terrain blocking the path between your home address and the transmitter site. Assuming they're full power stations, under this path condition, with a good install, in an ideal scenario this model has up to 100-mile UHF range (this is generally the longest possible LOS range with any TV antenna, due to the earth's curvature) range and under 35 mile LOS range on VHF (the optional upgrade kit upgrades VHF range to up to 80 miles). Ranges assume best case, ideal scenario.

1edge– This means there is one significant object blocking the path to your home, from that TV station. Many antennas stop right here, unless they're highly directional. A Yagi antenna such as this model, can often still manage to pick these signals up, by retrieving the small signal remnants that managed to "bounce off" or refract off the terrain. However, the remnants are generally weaker, thus these paths can reduce range "significantly", (depending upon obstruction severity)

2edge - This is about the worst-case path scenario and it's often very vague in terms to how challenging the signal capture actually is when you see it on the TVfool.com website. 2edge simply means there are "at least" two or more significant terrain obstructions blocking the path. The problem with these paths, is they are defined broadly and could mean anything from two small hills or 100 tall mountains in the way for example.

TROPO – Tropo paths can be rare and very sporadic, however occurs more often during summer and warm fall late nights and early mornings). This antenna model is terrific at taking advantage of Tropo / skywave conditions when they're present and other viewing areas may pop up late nights when running new auto programming channel scans while aiming toward them. Sometimes it can cause two stations on the same or nearby frequency to interfere with each other and create a drop out though. Although not predictable and may be infrequent, when Tropo conditions are present and ideal, range can sometimes be doubled to even tripled whilst Tropo skywave conditions are exceptionally favorable.

TROUBLESHOOTING GUIDE:

FIRST TIME CHANGING FROM CABLE TO ANTENNA & NO RECEPTION - Your TV set may still be in cable mode. You'll need to enter your TV sets settings to change it to "Over the Air / Antenna" mode and then run an "Auto Scan" to program the channels in;

ENTERING IN CHANNELS MANUALLY VS AUTO SCAN - Digital TV requires the "auto scan" feature to program the channels. Entering in the channels manually often wont retrieve most stations without the TV knowing if it's a digital or analog signal, it's "real" vs "virtual channel, and which subchannel of the main channel. Since digital TV's Real Chs / frequencies today are rarely the same as the Ch the stations uses on the TV, an auto programming can (found in the TV's settings) must be ran after each change in order to program / retrieve the new channels.

WHY AREN'T I GETTING GOOD RANGE / FAR-OFF STATIONS?:

A). Stations Aren't Actually in the Direction You Assumed: Many times the transmitter isn't located within the heart of a major city, but many miles outside of it for various reasons. Stations often choose open rural and higher elevation spots for their main broadcast towers and often their stations are 10 to 20 or more miles north, west, or south of the city. If you've entered your full home address at the "TV SIGNAL LOCATOR" page on TVfool.com, it not only shows the stations real and virtual channels, and the terrain "Paths" it also shows a handy compass from your home, illustrating the actual direction of each station. Additionally, they show the actual coordinates of each station's transmitter site as well (TVfool.com is the best free TV signal reference site for consumer usage).

B): HIGH INSTALL LOSS REQUIRES A SIGNAL AMPLIFIER / BOOSTER:

If you're running more than 50ft of RG6 Coax Cable (never use RG59 as it's very lossy), or have splitters in the coax line or running the antenna to more than one TV, a "low noise" signal preamplifier (also called a signal booster) should be added "before" the splitter or a long coax run drops the signal from the antenna. This signal should be amplified "before" high loss is added for a good result with them.

Additionally, if you're using any outboard tuner device (i.e. USB tuner, digital converter box tuner, etc) or using an older TV that requires an outboard Digital Converter (these are notorious for having inadequate gain), adding a signal preamplifier or booster may be necessary due to their lower tuner gain in comparison to a modern TV.

C).Signal Amplifiers Creating Too Much Amplification / Noise – Signal amplifiers go bad, however even working signal amplifiers can harm TV reception as too much amplification and noise can also be problematic.You'll need to remove all signal

booster/amplifier components off the coax line to see if it's helping or actually hurting reception (note: leaving an unpowered or defective signal amp/booster inline will add substantial loss, even when it's not powered on).

D). Aging or Damaged Coax Cable or Connector – Coax cable can unpredictably go bad either gradually or instantly (often by shorting or broken connection at the connector). Often pin size holes in the insulation or at the connection can cause problems over with loss. Just the smallest amount of moisture may have seeped in, which overtime caused the coax cable to reduce its conductivity due to corrosion. Depending on the amount of moisture contamination, this can become quite lossy in months or over several years... Additionally hard bends, crushing of the cable, or a poorly applied coax connector can all lead to issues in the coax as well!

E) Nearby obstructions / blockages – Do you have any metal, materials, large barn or neighboring homes or buildings in the way or large trees directly in front of the view of the antenna? These will all harm the range. Metal, large trailers, vehicles or a building across the street and similar blockages that are in the direct path of the antenna being the worse. If you can't clear their height(s), sometimes changing the mounting spot or even lowering the height can sometimes help alleviate the obstruction to some degree.

F). Major Terrain Blockages – As we explained earlier, you'll want to confirm the path terrain via running a quick TV signal report at TVfool.com using your "full" address. 1 edge paths represent a major terrain blockages and will be more challenging and harm range considerably as TV antennas must work with only the small signal remnants that managed to refract off such terrain. However, 2 edge, represent two or "more" blockages, which can sometimes stations completely impossible with any TV antenna. Sometimes 2 edge paths are possible if the obstructions aren't too severe, (just a few moderate sized hills)..

G). Indoor Mounting – Indoor performance will always be worse than mounting outdoors on top of the roof (or above the roofline). Inside just a stick built home may not be too difficult, but you may experience little to no reception if you reside in an apartment building, condo, or home that uses brick, rock, or concrete walls, or that uses stucco or metal siding (such as aluminum) as these materials effectively shield out radio and TV signals. If you absolutely must mount an antenna in this kind of building/home, mounting in front a window that faces the stations will be necessary.

ANTENNA ASSEMBLY INSTRUCTIONS

***WARNING: Powerlines can kill! A safe distance away from power lines should be at least “double” the total mast height plus double the length of the antenna!!**

*****Don't forget to properly ground your antenna per NEC standards!**

*****Also read and obey the safety warnings in this manual!**

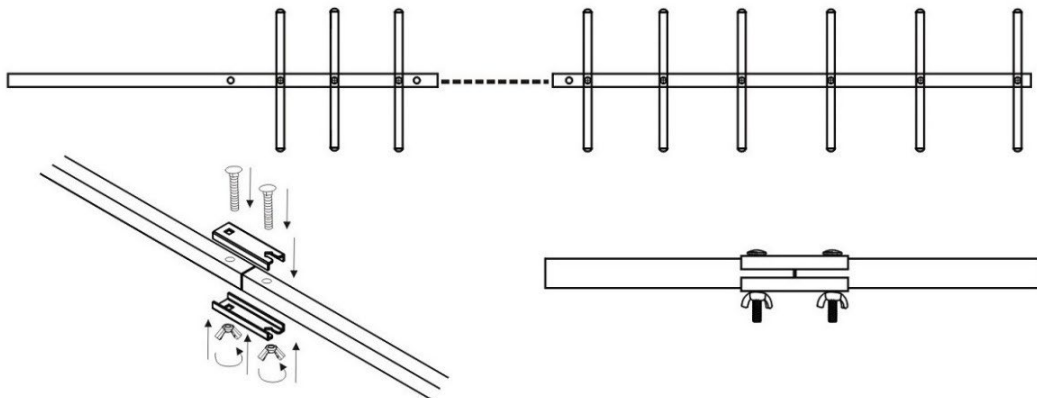
*****After antenna assembled, the mast clamp should be orientated such that the elements (round tubes on antenna) are horizontal (parallel with ground) when mounted on a mast.**

Thanks for purchasing our products. This guide will give you step by step instructions, please read this user manual carefully to ensure proper use of this antenna and keep this manual for future reference.

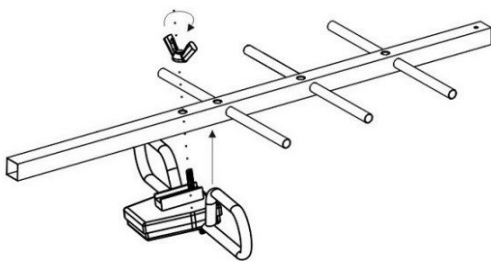
AERIAL ASSEMBLY INSTRUCTIONS:

A

Fasten the two boom sections together as shown.

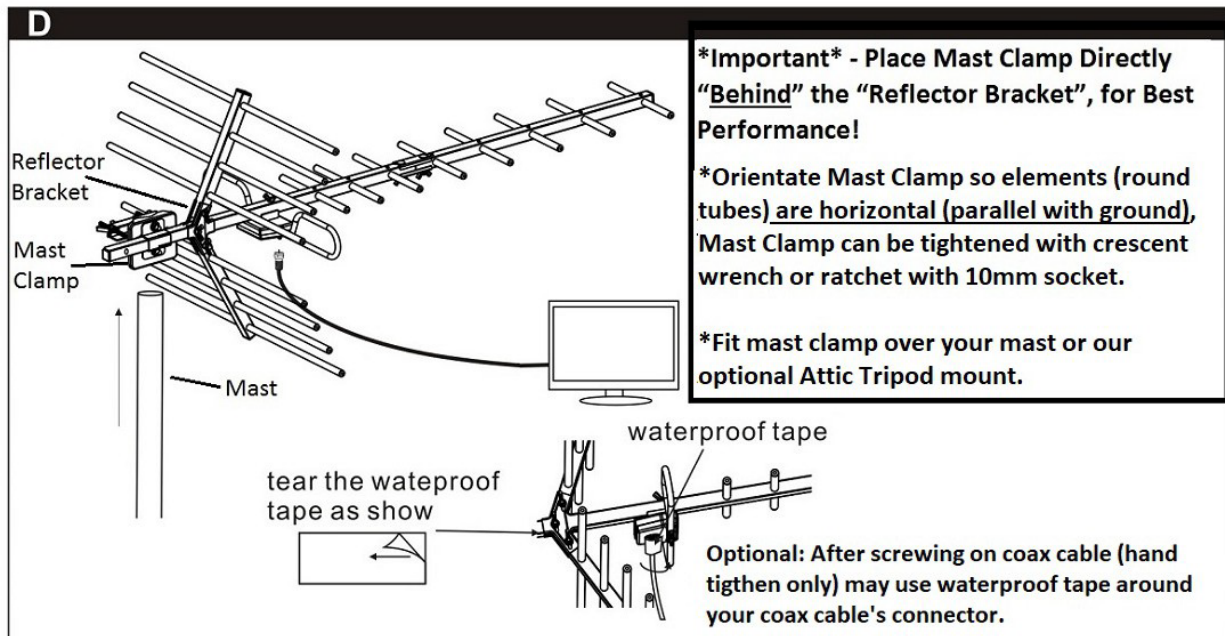
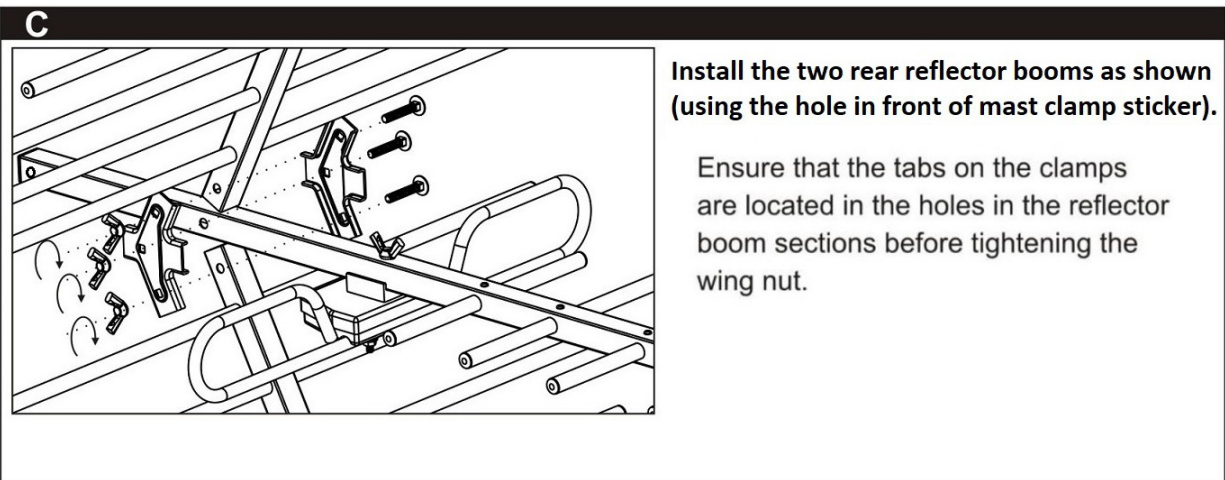


B



Install the Folded Dipole:

Use the pre-drilled hole location shown, found on the section with only 3 x short elements and install bolt and tighten wingnut by hand as shown in image.



***IMPORTANT – THE MAST CLAMP SHOULD BE PLACED OVER THE “PLACE MAST CLAMP HERE” STICKER AND SHOULD BE ORIENTATED SUCH THAT THE ANTENNA’S ELEMENTS (the “ROUND” tubes) ARE HORIZONTAL (parallel with the ground) when installed on a mast/pole.**

***Important If you were using cable previously, also remember to change your TV from cable to Over the Air Antenna mode, then start the Auto Program scan.**

***YOUR TV’S AUTO SCAN FEATURE IS NECESSARY!: After installation and after each change made, always remember to run an “Auto Program” scan on your TV (manually entering a channel will not usually retrieve the channel).**

***HAND TIGHTEN COAX CONNECTOR (a tool may break circuit board / connector).**

RANGE XPERTS BRAND TV ANTENNA TWO YEAR WARRANTY

***Important: Modifying, spray painting, dismantling or attempting to disassemble connection boxes, dropping of antennas, use of heavy machinery / tooling on / drilling into, and/or otherwise neglect voids warranty.**

For Range Xperts brands purchased Nov 2022 or Later, we've extended our One-Year warrant to two full years.

Warranty will cover part replacement for a full two years of Range Xperts brand of antennas (based on order date) for manufacturing related defects and may be used for two separate claims during that period.

Note: The warranty is void for items that have been altered, tampered with, and/or destroyed by customer (i.e. dismantling the connection boxes, or spray painting parts, etc) and is not intended for cosmetic (i.e. to get a new shiny antenna) issues, but for actual breakages that impact the function / usability of such product. For damages caused by impact trauma (i.e. dropping the antenna off a roof) or using vice grips / crimping, painting the antenna and/or its connections etc), or otherwise customer misuse, and/or excessive claims (beyond the two claims within the two year warranty coverage period) we reserve the right to charge for the part costs and shipping.

International Customers (outside the USA): although the warranty covers part replacement, if shipped to a non-US address you'll need to provide / pay the shipping costs and your country's duty / import fees & taxes for any warranty claims.

Full Warranty Policy Info & for Claims, Please Refer to Our Warranty Pages & Contact Info on www.RangeXperts.com or www.TopNotchAntennas.com